

Interdisciplinary Does Not Mean Intimidating

“What do you think about writing in science?” That question, posed during my interview for a science-teaching position by a potential colleague in the English department, changed the way I thought about interdisciplinary pursuits. I responded that I thought writing in science was crucial. Despite my seemingly confident reply, I knew little about incorporating writing into a science curriculum other than the standard question-and-answer formats commonly used on lab reports. I also knew little about how to incorporate effective techniques in teaching vocabulary, proper word usage, and reading comprehension skills, all common in a typical English curriculum.

As a young teacher, I thought interdisciplinary units had to be extensive, complicated, cotaught units that needed more time and energy to actually implement than the average mortal teacher possessed. Fortunately for my students, my teaching practice, and me, I was offered the job of teaching science next door to the English teacher, Ray, who conducted my job interview. Ray showed me that interdisciplinary units are not superhuman feats, but natural extensions of good teaching practice and conversations among colleagues.

Over the past eight years since that interview, Ray and I have worked together to mesh our two disciplines in multiple ways. Some of these links have been created formally, through sitting down and comparing our curricula. But many opportunities for cross-curricular work arose from casual conversations about what students were doing on the other side of our connecting door.

For instance, Ray has his students read essays by Annie Dillard (1974). We coordinate it so that his class reads the essays about elodea at the same time in the school year as mine conducts microscope work, allowing students to observe elodea under the microscope themselves. This continues on other days when poems about trees dovetail with studies of trees or careful observations of nature correspond to papers reflecting on the quality of beauty.

Students do not just hear about the same topics in two different classes, they are asked for specific skills in two contexts. Students need to be observers in two subjects for similar purposes—to learn to be detailed and specific, choose good words, and be complete and thorough in answers and reflections.

We hit upon a gold mine one year when I printed out for Ray all of the technical vocabulary I was asking students to learn and he gave me the list of roots, suffixes, and pre-

fixes he was teaching. Suddenly students could see the value of a common language, how English did not stop at the threshold of our adjoining door, but helped one understand words such as *pseudopod* and *exoskeleton*. Student retention of vocabulary increased dramatically, and they started bringing in material from history and Spanish classes.

The linking of conveniently pre-existing assignments grew naturally into the development of new ventures. I started assigning poetry writing during Ray’s poetry unit, and he used an extensive collection of nature posters to elicit reflections on insects or snakes during my animal unit. One year I decided to incorporate inclass essays about science, using Ray’s writing guidelines and technique suggestions. In English class, students were able to check with Ray on spelling and grammar and go outside to read their essays aloud to themselves; I allowed students to do the same in science class. Now, an underlying assumption exists that I am looking for good spelling, grammar, verb choices, and sentence construction—the same as next door.

As student writing in science became stronger, I moved my focus to reading. I used more poems, articles, excerpts, and other supplemental material to assess and foster skills such as identifying main ideas. With Ray’s help, I developed a reading comprehension assessment based on scientific readings.

Through all of these exchanges, I began to learn that interdisciplinary studies did not have to arise from labored sessions of searching for perfect matches between subjects, nor did they require extended, cotaught units. While there may be value in those approaches as well, there is also much to be gained by simple interactions, insertions, and combinations; and by the development of a common language and set of expectations. Ray and I sometimes talk of, dare I say it, coteaching a unit. But I no longer feel intimidated by the term *interdisciplinary*.

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Reference

Dillard, A. 1974. *Pilgrim at tinker creek*. New York: HarperCollins.

Editor’s note

Look for the February 2006 issue of *The Science Teacher* for more ideas about incorporating reading and writing in science.